

SYSTEM AND METHOD FOR MAINTAINING TIMING OF SYNCHRONIZATION  
MESSAGES OVER A REVERSE LINK OF A CDMA WIRELESS  
COMMUNICATION SYSTEM

ABSTRACT OF THE DISCLOSURE

5 A service option overlay for a CDMA wireless communication in which multiple allocatable subchannels are defined on a reverse link by assigning different code phases of a given long pseudonoise (PN) code to each subchannel. The instantaneous bandwidth needs of each on-line subscriber unit are then met by dynamically allocating none, one, or multiple subchannels on an as needed basis for  
10 each network layer connection. The system efficiently provides a relatively large number of virtual physical connections between the subscriber units and the base stations on the reverse link for extended idle periods such as when computers connected to the subscriber units are powered on, but not presently actively sending or receiving data. These maintenance subchannels permit the base station and the subscriber units to  
15 remain in phase, time and power synchronism while maintaining optimal timing control over synchronization messages. This in turn allows fast acquisition of additional reverse link capacity as needed by allocating additional orthogonal codes within the same code phase and by varying the spreading factor of the codes, as well as by adding additional code phases.